4:Grajdanzev--68 S-4 (no date) 1942 Formosans
116, 231, 492, 177.23 Japan
636.23

"Although it has been said that Taiwan is well stocked with domestic animals and fowls, this requires some qualification. The animals bred are for draft purposes and for production of foodstuffs. In Taiwan either the water buffalo or some type of cow is used for draft purposes. Horses, donkeys and mules are almost entirely absent. The immigrant from Fukien had no place for the horse in his economy, but the Japanese government, in its efforts to supply the army with horses, worked out a ten-year plan and a thirty-year plan for Taiwan. According to the first, the number of horses was to be increased to 9,000; according to the second presumably to be applied simultaneously, the number of horses was to be raised to 110,000 head. In a region where rice occupies sixty per cent of the area, horses cannot be used for work and it is hardly conceivable that the poor farmers of Taiwan will begin to raise Arabian and Anglo-Norman horses as the plan foresees (1). The actual number of horses in 1938 was rather more than 300 while forty

1. Taiwan Jijo, p. 479; figures for the plans are taken from Sekai Nenkan, 1939.

years ago there were two hundred to three hundred horses."

4:Grajdanzev--68-69 S-4 (no date) 1942 Formosans -1-2
116, 231, 492, 171

"The draft animals in Taiwan are the water buffalo and, second in importance, the 'yellow cow'. The water buffalo [69] is a strong animal, slow in movement, which likes to wade in water, and is satisfied with coarse fodder. Its meat is not very palatable. The yellow cow is less powerful but more alert, and its meat is much better than that of the buffalo. Milch cows in Taiwan are few in number—in 1938 they were estimated at 1,275. No statistics of the number of cows and buffaloes of working age are available, but the following total figures will suffice to show the trend (in thousands):

	1921	1932	1933	1934	1935	1936	1937	1938
Water buffaloes	307.9	286.3	302.2	306.9	305.8	292.3	282.1	259.7
Cows of all kinds	113.6	80.4	84.0	88.0	84.7	78.6	76.3	65.4
Total	421.5	366.7	386.2	394.3	390.5	370.9	358.4	325.1
Cultivated area (1,000 ko)	773.8*	839.7	845.5	851.3	856.8	872.3	883.3	884.4
Area per head of draft animals (in ko)	1.83	2.29	2.19	2.16	2.19	2.35	2.46	2.72

*1922.

The average number of ko per head of draft animals is therefore increasing and unless the quality of the buffalo is improving remarkably, the situation is becoming less and less

favorable. (1) Though official sources speak about improvement in the quality of pigs and

1. It is important to note also that the number of females among the draft animals is falling sharply: in 1921 there were 158,000; in 1933, 140,000; in 1937, 127,000.

horses, they are silent concerning the buffalo. In this respect Taiwan is worse off than the Philippines or the Netherlands Indies. In the table only cultivated land was taken into consideration; the crop area is in fact larger, and was growing faster than the arable area, so that the situation is actually worse than the figures suggest."

4:Grajdanzev--69-70 S-4 (no date) 1942 Formosans
116, 231, 492, 427, 422

"Official sources say that there is about one animal per farming family. (1) But this

1. Taiwan Jijo, p. 478.

is inadequate. According to the official statistics for 1937, the number of farming families was 427,397. If we take this figure (it was mentioned above that the actual number of families should be larger) for 1938, then only 0.76 animal was available for each family, if only farmers had cows [70] and buffaloes. This figure includes calves, is also an average figure, and it will be shown later that the wealth of the farmers, at least as expressed in land, is not concentrated around the average. The important conclusion which follows is that at least half the farmers in Taiwan have no draft animals, but are compelled either to work without them or to hire them from the richer farmers. Those who are acquainted with rural life know that dependence on one's neighbour for plough animals is likely to create very serious problems."

"The number of other animals in Taiwan may be seen from the following table (in thousands):

	1921	1932	1933	1935	1937	1938
Sheep	...	0.3	0.3	0.4	0.3	...
Goats	...	90.1	87.0	78.3	70.4	...
Pigs	1,281	1,754	1,807	1,873	1,849	1,827
Poultry	4,452	5,267	5,747	6,466	7,703	7,947
Geese	190	306.3	319.6	370.8	401.5	394.2
Ducks	890	1,379	1,496	1,772	1,958	2,225
Turkeys	...	9.2	11.2	18.5	30.8	35.3

As regards pigs and poultry the situation is more favorable: there was a considerable increase in pigs, poultry, geese, and ducks. On the average there are four pigs (including sucklings) and eighteen to nineteen hens per farming family (assuming that only farmers keep pigs and fowl). These are an important source of meat and income. (1) The develop-

1. The official estimate of an average per capita pork consumption of more than 28 kin a year (37 pounds) is probably an exaggeration. In 1938 one million pigs were killed. If consumption per capita averaged 28 kin, each pig must have weighed 160 kin, but the official estimate of the average weight is 130 kin.

ment is a consequence of the growth of the sugar industry—the cane waste can be utilized

on the farm as fodder. In this respect Taiwan is much better off than Korea. But one should not exaggerate the importance of these figures. It was officially estimated that in 1937 the gross value of products of animal breeding in Taiwan was ¥49.2 million or slightly more than twelve per cent of total agricultural production."

4:Grajdanzev--70-71 S-4 (no date) 1942 Formosans
116, 231, 177.23 Japan
636.23

"The government also expends much effort in encouraging sericulture. Its experts point out that conditions in Taiwan [71] are very favorable for this industry: the mulberry tree has leaves the year round, there are no pests as in Japan, and production costs are low. But the farmers do not seem to take willingly to this occupation, for in 1933 the value of raw silk produced in Taiwan was ¥74,000 whereas in 1937 it had fallen to ¥50,000."

10: Schumacher--224[2] T-1 (ca. 1896) 1898 Formosans
116, 231

An interesting element is the assimilation of the domestic animals. Besides the water-buffalo, which looks rather antediluvian, and the Australian cattle which were imported not too long ago, goats, pigs, and last but not least dogs, ought to be mentioned. It is a question whether it is due to the climate and the soil consistency of Formosa or to the purity of breeding that all the goats, pigs, and dogs and also the buffaloes are black. And even in their build the domestic animals of Formosa resemble one another, owing to their square, thickset forms and their short, stout legs.

31: Hofmann--604 [2] N-3 (1909) 1912 Formosans
116, 133, 231, 241, 311, 342

We travelled from Taihoku by train for 1 1/2 hours until we came to the small village of Toyen. Here the land is almost level and has been utilized to the fullest extent. The extensive rice plantations were green and threw into relief the picturesque houses of the Chinese; these are solid brick houses with a curved roof reminiscent of Buddhist temples. In the canals, for which the tributaries of the Tamsui are utilized, there are numerous tame ducks. In the small ponds one may see grey water buffalo, a domestic animal which occurs in large numbers of Formosa. It cannot be compared to European cattle as regards its usefulness in agriculture, and so far attempts to domesticate it have not been successful. Many times I saw the patient Chinese peasants threatened by the buffalo or saw that the animal had broken loose. Next to the rice fields there are extensive tea plantations. This is the region where the famous Oolong tea is produced. There are also banana and pineapple plantations on a smaller scale. The houses are surrounded by slender bamboo trees, and everywhere one may see betel palms, a tree which grows everywhere on Formosa.

45:Stanford U. S-4, 5 1956 AD1 Formosa
~~AD1~~ AD1

433
241
231 The raising of hogs is Formosa's third most profitable endeavor, only surpassed by the annual crops of rice and sugar cane. Pork and fish are the major sources of protein in the diet of the islanders. The annual production of various agricultural produce is presented in Tables 5, 6 7, and 8.

433
241
231

45:Stanford U. S-4, 5 1956 AD1 Formosa
AD1
AD1

Table 5. Food Production*
(in 1,000 metric tons)

	Rice	Sweet Potatoes	Soybeans	Peanuts	Wheat
1937	1,319	1,770	6	32	1
1938	1,402	1,726	6	28	1
1939	1,307	1,279	4	28	6
1940	1,129	1,512	3	29	4
1941	1,199	1,693	3	22	7
1942	1,171	1,556	3	13	6
1943	1,126	1,406	3	10	2
1944	1,068	1,521	5	12	2
1945	639	1,165	2	12	1
1946	894	1,331	4	37	1
1947	999	1,783	10	47	4
1948	1,068	2,003	12	53	6
1949	1,215	2,166	12	53	10
1950	1,421	2,201	13	57	19
1951	1,485	2,021	13	61	15

433
241
231

1952	1,570	2,090	15	60	17
1953	1,642	2,277	17	60	14
1954	1,695	2,324	17	67	15
1955	1,633	2,290	24	70	19

* Data for the years 1937-53, from Foreign Operations Administration Mission to China, Taiwan Economic Data Book, Part II, Volume III, Taipei, 1955; for 1954, from Industrial Development Commission, Industry of Free China, Vol. 3, No. 4, April 1955, Taipei; for 1955 from the Central Daily News, February 3, 1956.

45:Stanford U. S-4, 5 1956 ADI Formosa
ADI
ADI

433
241
231

45:Stanford U. S-4, 5 1956 AD1 Formosa
AD1

Table 6. Commercial Production*

	Sugar Cane	Tea	Citronella	Jute
	(in 1,000 metric tons)			
1937	8,563	13	-#	9
1938	9,061	13	-*	14
1939	12,822	14	-*	15
1940	9,977	12	273	11
1941	8,392	12	174	7
1942	10,250	12	319	11
1943	10,092	8	201	7
1944	8,468	4	35	4
1945	4,159	1	29	2
1946	1,007	3	12	1
1947	796	7	61	3
1948	3,116	8	213	11
1949	6,194	10	380	9
1950	5,861	10	762	7
1951	3,585	10	1,274	11

45;Stanford U. S-4, 5 1956 AD1 Formosa
AD1

433
241
231

1952	4,801	12	2,561	20
1953	8,394	12	2,527	5
1954	6,130	13	-	12
1955	-	14	-	19

* Data for 1937-53, Taiwan Economic Data Book, Part II, Volume III; for 1954, Industry of Free China, Vol. III, No. 4, March 1955; for 1955, the Central Daily News, February 3, 1956.

\# February 3, 1956 not available.

433
241
•231

45:Stanford U. S-4, 5 1956 AD1 Formosa
~~AD1~~
AD1

Table 7. Production of Fruit*

	Pineapple	Banana	Citrus
	(in 1,000 metric tons)		
1937	108	219	33
1938	116	202	36
1939	146	182	35
1940	129	169	32
1941	130	191	39
1942	116	196	34
1943	94	142	29
1944	43	65	21
1945	18	32	17
1946	17	53	20
1947	40	124	25
1948	39	110	28
1949	43	98	27
1950	46	117	28
1951	52	100	27

45:Stanford U. S-4, 5 1956 AD1 Formosa
AD1

433
241
231

1952	63	107	28
1953	68	96	29
1954	62	109	31
1955	64	90	33

* Data for 1937-53, from Taiwan Economic Data Book, Part II, Volume III; for 1954, from Industry of Free China, Vol. III, No. 4 April 1955; for 1955 from the Central Daily News, February 3, 1956.

AD1

45: Stanford U. S-4, 5 1956 AD1 Formosa AD1

(Table 8 follows p. 550.)

Table 8. Production of Livestock*
(in 1,000)

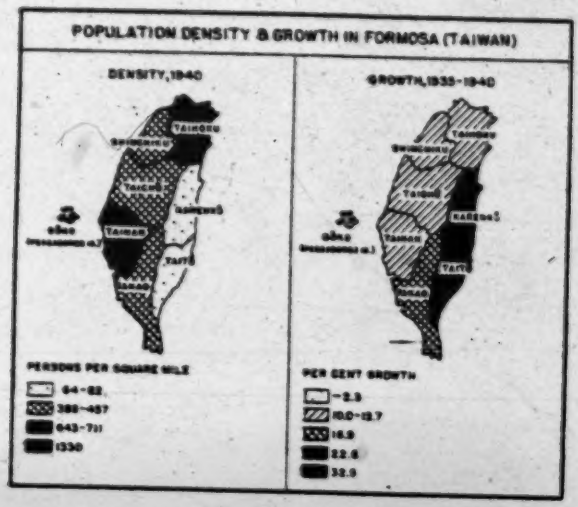
	Hogs	Cattle	Chickens	Ducks
1937	1,849	358	7,073	1,958
1938	1,827	325	7,095	2,023
1939	1,653	325	6,680	1,931
1940	1,205	300	#	-
1941	1,158	309	-	-
1942	1,358	312	-	-
1943	1,257	325	5,543	1,896
1944	862	331	3,837	1,358
1945	578	291	3,998	1,136
1946	768	280	4,555	1,647
1947	1,006	298	5,119	2,247
1948	1,167	310	4,525	1,985
1949	1,362	357	4,989	2,217
1950	1,620	365	5,143	2,547
1951	2,262	375	5,387	2,991
1952	2,611	383	5,593	2,912
1953	2,820	390	6,165	3,103

* Data on hogs and cattles are from Taiwan Economic Data Book, Part II, Vol. III; on chickens and ducks 1937-39, from Taiwan keizai nenpo 1941 [Taiwan Economic Annual 1941]; for 1943-53, from Taiwan Agricultural Yearbooks.

\# Not available.

[table 8 follows p. 550]

161



Taiwan, Population Density (1940) and Growth (1935-1940)

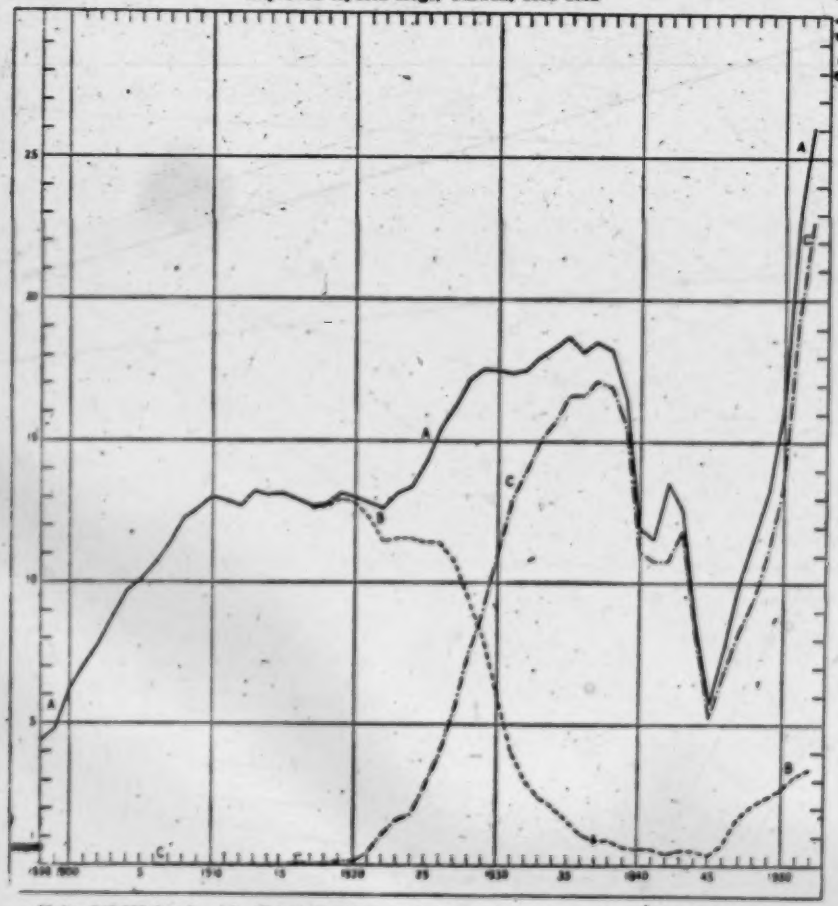
231
291
854

Peasant Scene in Southern Taiwan

48: Chen E-4 (no date) 1955 AD1 Formosa AD1

farmer received some bean cake for fertilizer. However he was afraid that this new and strange material would hurt his crop, so he threw it away in a grove of bamboo. Later he found that the bamboo around the bean cake had shot up tremendously, and he realized for the first time that commercial fertilizer was useful, and began to use it on his crops. It is not an easy task for the conservative farmer to depart even a little from his traditional way of life, and experiment with new methods. But when once the experiment is begun, new experiences will lead him farther. The use of commercial

Fig. 10: Total Number of Hogs and the Number of Native Hogs and Improved Hybrid Hogs, Taiwan, 1898-1952



Unit: 100,000 head A: Total Number B: Native Hogs C: Improved Hybrid Hogs
Source, 1898-1950, from Animal Resources of Taiwan, pp. 58-59
1951-1952, from Taiwan Agricultural Yearbook, 1952

48: Chen E-4 (no date) 1955 AD1 Formosa AD1

The use of commercial fertilizer spread quickly, and with textiles, became one of the main items of import from Japan.

For the improvement of hog raising, the colonial government had imported Berkshire hogs from Japan in 1896, and Yorkshire hogs from England in 1900. After a series of experiments, it was found that the first generation of hybrids between the native hog and Berkshire hog was most suitable to Taiwan, and the promotion of the hybrid was started in 1907. As in other agricultural practice, the traditional way of hog raising was a complicated procedure. Many religious and magical elements were involved in it, and it was not easy for the conservative farmer to adopt the profitable new hybrid. It took more than ten years of government promotion before people became willing to adopt the new hybrid. After 1920 more and more people adopted it, and the number of native hogs declined sharply (Fig. 10). This is the best instance of change in the attitude of the people. A new strain of rice (Ponlai rice) has been extensively cultivated since 1924, and the output of rice has sharply increased.

The 1920's is the turning point in the social history of Taiwan. Epidemics were wiped out, prevention of malaria had improved, the doctors of western medicine exceeded the doctors of the Chinese medicine, and even the cattle pest was wiped out. Political and social movements began for the first time. Primary education spread wider, the conservative farmer began to adopt new strains and new technics, and increase production. Mobility of the people had increased, more bicycles, automobiles, and trucks were used, and the level of living was raised somewhat. It was amid this social milieu that Taiwan's death rate steadily declined while its already teeming population with equal steadiness rose to new heights.